

From: Luke Johnson [LukeJohnson@fortmojave.com]
Sent: Monday, August 12, 2013 11:08 AM
To: Salire, Tess
Cc: Russell Ray; Lisa Wayne
Subject: FW: LUST Fort Mojave Smokeshop & Formal UST Closure Letter

Tess,

I have been following email discussion back and forth on treatment or disposal of contaminated soils. Based on the following, this is what the Fort Mojave Environmental Office has done on past projects:

40 CFR 280.65 - INVESTIGATIONS FOR SOIL AND GROUND-WATER CLEANUP.
§ 280.65

(a) In order to determine the full extent and location of soils contaminated by the release and the presence and concentrations of dissolved product contamination in the ground water, owners and operators must conduct investigations of the release, the release site, and the surrounding area possibly affected by the release if any of the following conditions exist:

- (1) There is evidence that ground-water wells have been affected by the release (e.g., as found during release confirmation or previous corrective action measures);
 - (2) Free product is found to need recovery in compliance with § 280.64 ;
 - (3) There is evidence that contaminated soils may be in contact with ground water (e.g., as found during conduct of the initial response measures or investigations required under §§ 280.60 through 280.64); and
 - (4) The implementing agency requests an investigation, based on the potential effects of contaminated soil or ground water on nearby surface water and ground-water resources.
- (b) Owners and operators must submit the information collected under paragraph (a) of this section as soon as practicable or in accordance with a schedule established by the implementing agency.

FORTMOJAVE PLAN:

(a)(1). Fort Mojave has yet to determine the full extent and location of soils contamination, Fort Mojave is to conduct investigations of release to the surrounding areas. ACTION: We are in discussion with Zelen Inc. in obtaining RFPs for conducting this investigation to determine (a)(2) is there free product to be addressed, (a)(3) is contaminated soils in contact with groundwater, and (a)(b) Fort Mojave will submit those findings to EPA Region 9 with a remediation plan for Region 9s assessment, recommendations and approval of remediation plan, (a)(4) EPA Region 9 will by investigation approve and affirm the local conditions in support of an approved remediation plan.

Our Zelen directives are as follows:

- 1) Direct Zelen to the investigation procedures and costs as outlined by EPA Region9 and determine extent of contamination.
- 2) Have Zelen include disposal costs to an approved landfill, there shall be no burning of contaminated soils.
- 3) Remove the LUST, the tank shall not be filled and left in the ground.

From this we can determine with EPA other remedial action to follow, including new tank types, all new installations.

Luke Johnson, Fort Mojave Environmental Director
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lukejohnson@fortmojave.com

From: Russell Ray
Sent: Monday, August 12, 2013 8:52 AM
To: Dennis Krantz
Cc: Luke Johnson
Subject: FW: LUST Fort Mojave Smokeshop & Formal UST Closure Letter

Dennis, take a look at the e-mail below sent by Tess Salire at EPA. Let me know if you've considered other alternatives in dealing with the site's contaminated soil (I agree with your plan as you've explained it).

Thanks,

Russ

From: Salire, Tess [<mailto:Salire.Tess@epa.gov>]
Sent: Friday, August 09, 2013 5:18 PM
To: Russell Ray
Cc: Luke Johnson; Smokeshop2@hotmail.com; Lisa Wayne
Subject: RE: LUST Fort Mojave Smokeshop & Formal UST Closure Letter

Ok, I understand now. As I've said in my previous email, you have to look at other alternatives, compare the costs and benefits, and work with EPA and other regulatory agencies to approve the selected remedy.

Zelen addressed the vapor migration issue (subsurface) in the email below but not the concern about PCS incineration, which is mostly air emission (surface and ambient).

From: Russell Ray [<mailto:russellray@fortmojave.com>]
Sent: Friday, August 09, 2013 5:08 PM
To: Salire, Tess; Salire, Tess
Cc: lukejohnson@fortmojave.com; Smokeshop2@hotmail.com; Lisa Wayne
Subject: RE: LUST Fort Mojave Smokeshop & Formal UST Closure Letter

Hi Tess and Bobby,

First, attached is our formal intent to close the leaking UST at the Fort Mojave Smokeshop.

Second (Tess) – If my memory is correct, Bobby wanted more information on our contractor's intent to burn the contaminated soil at the site, rather than dispose of it. Our contractor (if his bid is accepted) recommended this remedy.

Have a good weekend,

Russ

From: Salire, Tess [<mailto:Salire.Tess@epa.gov>]
Sent: Friday, August 09, 2013 5:00 PM
To: Russell Ray
Subject: RE: LUST Fort Mojave Smokeshop

Did Bobby raise the concern? Sorry, I was not copied on that email... or did he call you? I'll let you know if your response is ok.

Tess

From: Russell Ray [<mailto:russellray@fortmojave.com>]
Sent: Friday, August 09, 2013 4:57 PM
To: Ohja.Bobby@epa.gov; Salire, Tess
Subject: FW: LUST Fort Mojave Smokeshop

Hi Bobby and Tess,

You voiced your concern with incinerating the contaminated soil at the Fort Mojave Smokeshop LUST site where air emissions are concerned. I forwarded that question to Zelen Environmental (the firm likely to be given the remediation contract). Here is their response – is it satisfactory?

Let me know, and thanks.

Best Regards,

Russell Ray
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 Please consider the environment before printing this e-mail

From: Dennis Krantz [<mailto:dvkrantz@gmail.com>]
Sent: Friday, August 09, 2013 1:56 PM
To: Russell Ray; Mike K
Subject: Re: LUST Fort Mojave Smokeshop

Russell,

To address your question, yes Zelen can conduct vapor sampling for you. We have conducted vapor sampling using probes placed below concrete slabs under buildings, as well as probes installed at multiple vertical horizons to establish a vertical profile of vapor concentrations. We have closed LUST sites in Arizona by estimating human health risk from vapor sample analyses using the Johnson-Ettinger model developed by the EPA. Keep in mind that sampling under a concrete slab under an active building can be very disrupting to the operations in the building because the concrete must be drilled to install the sampling probe, and the conduit to the probe must remain accessible for sample collection. As a first step I would recommend that you survey the property and immediately surrounding area and document the presence of basements (if any), concrete slabs, what kind of buildings overlie the slabs, and the distance of the slabs from the release. Has the EPA identified a time frame for the vapor migration testing?

Here are several resources from the EPA website regarding tank closure and vapor assessment:

[http://yosemite.epa.gov/r10/water.nsf/UST/UST+O&M/\\$FILE/IL-Closure-Guidance-0109.pdf](http://yosemite.epa.gov/r10/water.nsf/UST/UST+O&M/$FILE/IL-Closure-Guidance-0109.pdf)
http://www.epa.gov/oust/cat/pvi/pviwebinar_sampling_techniques_hartman.pdf
<http://www.epa.gov/oust/ltffacts.htm>

The closure guidance is out of Region X but the recommendation is to follow procedures established by the state where the USTs are located. The following is a general outline of procedures. During closure of a tank we typically collect a soil sample from two feet below each end of the tank using a backhoe. The intent is to sample native material, not material used to bed the tank. For gasoline tanks we analyze the samples for benzene, toluene, ethylbenzene, and xylenes in accordance with EPA Method 8021B. After sampling, the excavation is backfilled with the excavated soil, plus enough clean fill to make up the volume of the tank that was removed. We do not take soil off site for treatment because the procedure is expensive and the un-excavated contamination must still be remediated using in-situ methods. The in-situ methods can be used for the entire remediation. If dispensers and piping are removed additional sampling is required in those areas.

To investigate a release from an underground storage tank system after the tank has been removed we start with a vertical borehole at the release point, sampling soil every five feet until non-detection for chemicals of concern is encountered, or groundwater is reached. With groundwater at about 15 feet below the surface in Mohave Valley, the release will undoubtedly extend to the groundwater. A groundwater monitoring well is then installed at the release for future monitoring. At least three additional boreholes are drilled around the release, and soil sampled and analyzed to establish the lateral extent of contamination from the release. If contamination exists at concentrations greater than cleanup standards then additional boreholes must be drilled farther from the release until the extent is established. If groundwater is impacted at least two additional monitor wells are installed, one down gradient to evaluate the migration of the release, and one cross gradient so the groundwater gradient can be calculated. Depending on the results of this work additional boreholes and monitor wells may be needed.

I hope this outline helps you with your planning. If you have questions please call or e-mail.

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Dennis Krantz
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On Fri, Aug 9, 2013 at 11:28 AM, Russell Ray <russellray@fortmojave.com> wrote:
Dennis,

The Tribe is required to test for migration of vapor (related to the fuel leak) into basements and sewers (although basements aren't common in this area). Is this a service that Zelen will perform for the Tribe? Let me know, and thanks.

Russell Ray
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